Course Description: Continues the introduction from COSC 1010 to the methodology of programming from an object-oriented perspective. Through the study of object design, introduces the basics of human-computer interfaces, the social implications of computing, with an emphasis on software engineering.

Prerequisites: COSC 1010 or equivalent experience and concurrent registration in MATH 1405 or MATH 1450.

Objectives: We will focus on two primary tasks: enhancing object-oriented program design skills and gaining practical expertise with the C++ language. Particular objectives which we will pursue are detailed as follows:

- Mastery of C++ syntax for structured programming with sequential, selection, looping and procedural capabilities.
- Mastery of basic procedural programming concepts for solving simple computational tasks and verifying correctness.
- Mastery of C++ syntax for describing simple data structures with class definitions and implementations.
• Advanced practice in use of object-oriented design techniques to implement simple computational problem solutions.

• Practice in C++ Standard Template Library use for data structure and algorithm implementation.

In doing this, we will continually wrestle with the demands of good programming design practice and the constraints imposed by the language with which we complete the design.


**Course Policies:**

- **Grading:**
  - A 90% - 100%
  - B 80% - 89%
  - C 70% - 79%
  - D 60% - 69%
  - F Below 60%

- **Percent of Grade:**
  - Quizzes – 5%
  - Labs – 25%
  - Hour Exams (3) – 30%
  - Programming Assignments – 30%
  - Final Exam – 10%

**“Homework”, Quizzes and Exams:** The course text is rich with Self-Review Exercises which will provide you with significant syntax practice. The schedule provides a guideline for which portions of the text to concentrate upon. Your daily “homework” should include reading the text and checking your comprehension with the Self-Review Exercises. This will typically require access to a C++ development environment in order to enter and test live code. **It will be to your advantage to become very comfortable with Microsoft Visual Studio (2013) for C++**.

Normally, there will be a brief in-class quiz given each Tuesday (not preceded by an exam). The lowest single quiz grade will be dropped from your final semester quiz average. **A missed quiz or exam cannot be made up without a University Excused Absence.**
Programming Assignments: Programming assignments will be given on a weekly basis. Typically, assignments will be made available on-line on Tuesday and will be due by Midnight on Friday. Submission of work will be electronically via the COSC 1030 Course website on WyoCourses. Credit for late submissions will be deducted at the rate of 20% per 24 hour period late (e.g., if you submit by 00:01 am on Saturday, the maximum you may receive is 80%). A programming assignment will be due during the last week of classes.

Laboratory: Attendance at and completion of all laboratories is required. You MUST attend the lab section in which you are enrolled. If you have a University excuse for absence for a lab time, arrange with your instructor/TA to attend a different lab section for that week only. An unexcused absence from lab will result in a grade of 0 for that lab. Labs will meet weekly. Lab assignments must be turned in electronically to the COSC 1030 WyoCourses site no later than 48 hours after the end of the given lab session. No lab submissions will be accepted after the 48 hours period. A lab assignment will be due during the last week of classes.

Course Website and Email: Course materials (including this syllabus, programming assignments, laboratory procedures, and examples from lecture sessions) will be posted on the WyoCourses course site. It is expected that you will check your email regularly for changes to the schedule, feedback for electronically submitted assignments, and for notice of updates to online resources. Each student should check their UW registered email address frequently. If you are primarily using a different email address, then forward your UW email to the address you check regularly. (See the IT web at [http://www.uwyo.edu/askit/displaydoc.asp?id=5101](http://www.uwyo.edu/askit/displaydoc.asp?id=5101). Note that if you are unfamiliar with WyoCourses, you should see [www.uwyo.edu/wyocourses/student_support/index.html](http://www.uwyo.edu/wyocourses/student_support/index.html). You can change the the way (including different email or text messaging) you are notified from your settings.

Academic Honesty: Assignments are intended to be completed independently unless otherwise specified by the instructor. UW Regulation 6-802 defines academic dishonesty and specifies the penalties (see Office of the General Counsel's webpage and select New Regulatory Structure for the content of all the University regulations)

Collaboration and discussion are acceptable, but you MUST do your own work. The grade you receive must represent your effort and achievement not that of others. Anything else is unfair to you and to your fellow students.

Attendance: Attendance at the lecture is highly recommended as not all material will come from the texts. (see further UW Regulation 6-713)

Students with disabilities: If you have a physical, sensory, cognitive, or psychological disability and require accommodations, please let me know as soon as possible. You will need to register with, and provide documentation of your disability to, University Disability Support Services (UDSS) in Student Educational Opportunity (SEO), room 109 Knight Hall.
Early Alert: In late September, you can view a progress report in WYOWEB for your classes. When you click on the Students tab in WYOWEB, you will see Quick Links on the left side bar, go to EARLY ALERT grades. You will see either a P for pass, or a D or F grade for each of your courses. If you have withdrawn from the class you will see a W. Be sure to talk to your instructor if you have a D or F grade. Remember, this is a progress report—not a final grade! This is an ideal time to visit with your instructor and/or your advisor to talk about your options and avenues for support in the class (call 766-2398 for the Center for Advising & Career Services).

Suggestions: Some recommendations for study which you should consider are as follows...

- **Don’t miss class.** New material is covered each lecture, including methods and concepts which are not covered in the course text. The course moves very quickly. You can’t afford to miss class.

- **Read in advance.** The reading assignments are detailed on the WyoCourses site. It will be assumed that you’ve read the pages described before the lecture session. The text contains a significant number of self-review exercises and lots of sample code, you should be covering all of the associated elements in the prescribed reading sections.

- **Play with the sample code.** Sample program code used in lecture will be provided on the WyoCourses course site. Download the code, compile, run, experiment.

- **Don’t ignore the quizzes, labs and programming assignments.** They comprise a total of 55% of your grade. If you only completed the exams, you would need to score perfectly on all exams to avoid an F grade for the semester (and, you would only get a low D for your efforts).

- **Get your “hands dirty” with the code.** You must become comfortable with programming, testing, debugging, re-testing.

Other Information: The use of cell phones, pagers, and other devices that beep, ring, etc. is prohibited in class. They must be turned off or set to "silent". Text messaging is extremely distracting so please wait until after class to reply to or check your messages. I know many of you like to use laptops and tablets in class, but please, only take notes.
Basic Course Schedule: The academic calendar that can be accessed from WyoWeb (Registrar), shows ‘important’ dates. The ones that most concern us are:

- January 26, First day of classes
- March 16-20, Spring break
- March 18, Midterm Grades due
- May 8, Last day of classes
- May 12, Final Exam, 10:15 AM – 12:15 PM
- May 16, Commencement

Notes:

- The above schedule is subject to change. The latest version will always be on the course website.

- Office hours are kept for the benefit of the students. They are intended to be set times when the instructor is available in his office to answer questions, discuss course material and provide help. If I will not be available for office hours, you will be notified as much in advance as possible. There are times when this may have to be a note on my door. I am normally here at the University from 0800 to at least 1430 Monday through Friday. I do have other classes. If you wish to come by outside of scheduled hours, please feel free. I will not guarantee that I can talk to you but we can make arrangements for some other time when I am available. You can also call or email.

- I do not often read email in the evenings and on weekends. I do have my machine on all the time I am in the office and unless I get absorbed in something, I read and answer my email all day. But, do not plan on an immediate answer. I will read and answer as fast as I can but there are no guarantees.

This Syllabus: This document is subject to change. Any changes will be communicated to the students in a timely manner. No changes involving grading will affect assignments already given at the time of the change. No changes in assignment due dates will affect current assignments if such change causes the assignment to be due earlier than originally indicated.

Last Update: January 23, 2015